

IN THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1 to 4 (canceled).

Claim 5 (previously presented): A fuel cell system for mobile use comprising:

a fuel cell unit for generating electrical energy and fuel cell waste products;

a cooling circuit assigned to the fuel cell unit and having a heat exchanger downstream of the fuel cell unit;

an adsorption accumulator assigned to the fuel cell unit and forming a heat store adapted to release heat when adsorbing the fuel cell waste products, the adsorption accumulator being operatively thermally connected to the heat exchanger;

a first line connected to the fuel cell unit discharging the fuel cell waste products from the fuel cell unit; and

a second line connecting the first line to the adsorption accumulator for feeding the fuel cell waste products to the adsorption accumulator.

Claim 6 (previously presented): The fuel cell unit as recited in claim 5 wherein the adsorption accumulator includes at least one of a zeolite, a silica gel and a metal hydride.

Claim 7 (previously presented): A method for operating a fuel cell system for mobile use, the fuel cell system including a fuel cell unit for generating electrical energy and fuel cell waste products, a cooling circuit assigned to the fuel cell unit and having a heat exchanger downstream of the fuel cell unit, an adsorption accumulator assigned to the fuel cell unit and forming a heat store adapted to release heat when adsorbing the fuel cell waste products, the adsorption accumulator being operatively thermally connected to the heat exchanger, a first line connected to the fuel cell unit for discharging the fuel cell waste products from the fuel cell unit, and a second line connecting the first line to the adsorption accumulator for feeding the fuel cell waste products to the adsorption accumulator, the method comprising:

when the fuel cell system is starting up, heating coolant in the cooling circuit via the heat exchanger using heat stored in the adsorption accumulator, with the fuel cell waste products being fed to the adsorption accumulator at the same time, the fuel cell waste products including waste gas, and

in normal operation, feeding heat to the adsorption accumulator via the heat exchanger, with the coolant in the cooling circuit heated by the fuel cell unit being fed to the heat exchanger.

Claim 8 (previously presented): The method as recited in claim 7 wherein the adsorption accumulator includes at least one of a zeolite, a silica gel and a metal hydride.

Claim 9 (previously presented): The fuel cell system as recited in claim 5 the fuel cell waste products include water vapor and the adsorption accumulator is adapted to produce thermal energy by bonding the water vapor.

Claim 10 (previously presented): The fuel cell system as recited in claim 9 wherein the heat exchanger is adapted to transfer the thermal energy produced by the adsorption accumulator from the adsorption accumulator to the cooling circuit.

Claim 11 (previously presented): The fuel cell system as recited in claim 10 wherein the cooling circuit is adapted to transfer the thermal energy produced by the adsorption accumulator to the fuel cell to facilitate a cold start of the fuel cell.

Claim 12 (previously presented): The fuel cell system as recited in claim 5 further comprising an actuator coupled between the fuel cell and the adsorption accumulator, the actuator being adapted to pass the fuel cell waste products from the first line to the second line during a cold start of the fuel cell system and to prevent the passage of the fuel cell waste products from the first line to the second line after the cold start.

Claim 13 (previously presented): The fuel cell system as recited in claim 12 further comprising a second actuator located between the fuel cell and the heat exchanger, the second actuator adapted

to pass coolant heated by the fuel cell to the heat exchanger to charge the adsorption accumulator after the cold start.

Claim 14 (previously presented): The fuel cell system as recited in claim 12 wherein the actuator is a three-way valve.